# Material Safety Data Sheet

**Ferric Alum Indicator** (RXSOL-60-6566-100)

## 1. Product and Company Identifaction

| | |
|---|---|
| Product Name | Ferric Alum Indicator |
| Part Number | RXSOL-60-6119-100 |

Company Details:
RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Branch : Sikka, Kandla, Dahej , Hazira, JNPT, Goa, Mngalore, Cochin, Tuticorin,Chennai, Kakinada,Vizag, Paradip, Haldia, Kolkata,Fujairah

| | |
|---|---|
| Phone | +91 22 27815540 / 27815542 |
| Fax | +91 22 2781 1318 :::AOH :0091 9821214367 |
| Email | 123@rxmarine.com |
| Website | www.rxmarine.com |

## 2. Composition / informationon ingredients

| ChemicalName | Cas Number | Formula | Molecular Weight | Weight% |
|---|---|---|---|---|
| Water | 7732-18-5 | H?O | 18.01 g/mol | 81.00% |
| Nitric Acid | 7697-37-2 | HNO? | 63.01 g/mol | 9.74% |
| Ferric Ammonium Sulfate Dodecahydrate | 7783-83-7 | NH?Fe(SO?)?·12H?O | 482.19 g/mol | 9.26% |

## 3. Hazards Identification

Classification of the Substance or Mixture.

| HazardClass | Category | Hazard Statement | Precautionary Statements |
|---|---|---|---|
| Acute Toxicity - Inhalation | Category 2 | H330 | P260, P271, P285, P304+P340, P310, P320, P403+P233, P405, P501 |
| Skin Corrosion / Irritation | Category 1A | H314 | P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501 |
| Eye Damage / Irritation | Category 1 | H318 | P280, P305+P351+P338, P310 |
| Germ Cell Mutagenicity | Category 2 | H341 | P201, P202, P280, P308+P313, P405, P501 |
| SpecificTargetOrgans/SystemicToxicityFollowingSingleExposure | Category 1 | H370 | P260, P264, P270, P307+P311, P321, P405, P501 |
| Specific Target Organs/SystemicToxicity Following Repeated Exposure Category | Category 1 | H372 | P260, P264, P270, P314, P501 |
| Corrosive to Metals | Category 1 | H290 | P234, P390, P406 |

Hazard Statement

| Hazard Number | Hazard Statement |
|---|---|
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H330 | Fatal if inhaled. |
| H341 | Suspected of causing genetic defects. |

| | |
|---|---|
| H370 | Causes damage to organs. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| Precautionary Statements: | |
| Precautionary Number: | Precautionary Number: |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P234 | Keep only in original container. |
| P260 | Do not breathe fumes, mist, vapors, or spray. |
| P264 | Wash arms, hands and face thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area |
| P280 | Wear protective gloves and eye protection. |
| P285 | In case of inadequate ventilation wear respiratory protection. |
| P301+P330+P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easytodo. Continue rinsing. |
| P307+P311 | IF exposed: Call a POISON CENTER or physician. |
| P308+P313 | IF exposed or concerned: Get medical attention. |
| P310 | Immediately call a POISON CENTER or physician. |
| P314 | Get medical attention if you feel unwell. |
| P320 | Specific treatment is urgent (Wash areas of contact with water immediately). |
| P321 | Specific treatment (Wash areas of contact with water immediately). |
| P363 | Wash contaminated clothing before reuse. P390 Absorb spillage to prevent material damage. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |
| P406 | Store in corrosive resistant container with a resistant inner liner. |
| P501 | Dispose of contents in accordance with local, state, federal and international regulations. |
| Hazards not Otherwise Classified or Covered by GHS | Data not available. |

## 4. First Aid Measures

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| Eye Contact | IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing. |
| Inhalation | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| Skin Contact | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time. |
| Ingestion | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary. |
| Most Important Symptoms and Effects, Acute and Delayed | Corrosive Liquid. May be fatal if swallowed. Avoid contact with skin, eyes, and clothing. Avoid breathing vapor. If swallowed, do not induce vomiting. Dilute with water and call a physician. Wash areas of contact with plenty of water. Potential symptoms of overexposure are irritation of the eyes, mucous membranes and skin, dental erosion, bronchitis, pneumonitis, delayed pulmonary edema. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time. |
| Medical Attention or SpecialTreatment Needed | Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water immediately). Specific treatment (Wash areas of contact with water immediately). |

## 5. Fire-fighting Measures

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| Extinguishing Media | Use any means suitable for extinguishing surrounding fire. |

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| Specific Hazards Arising from the Substance or Mixture | Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can react with metals to release flammable hydrogen gas. May react explosively with combustible organic or readily oxidizable materials such as: alcohols, turpentine, charcoal, organic refuse, metal powder, hydrogen sulfide, etc. |

## 6. Accidental Release Measures

| | |
|---|---|
| Personal Precautions, Protective Equipment and Emergency Procedures | Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. |
| Cleanup and Containment Methods and Materials | Cover the spill with Sodium Carbonate or a soda ash-slaked lime mixture (50:50). Mix and add water to form slurry. Decant the liquid to the drain with excess water. Treat the solid residue as normal refuse unless there are regulations prohibiting this practice due to the iron content. Always dispose of in accordance with local regulations. |

## 7. Handling and Storage

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|---|---|
| Precautions for Safe Handling and Storage Conditions | Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. |

## 8. Exposure controls and personal protection

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|---|---|
| Engineering Controls | Use only outdoors or in a well-ventilated area. No specific controls are needed. Normal room ventilation is adequate. |
| Respiratory Protection | In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. |
| Skin Protection | Wear protective gloves and eye protection. Chemical resistant gloves. |
| Eye Protection | Wear protective gloves and eye protection. Safety glasses or goggles. |
| Personal Protective Equipment | Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles. |

## 9. Physical and chemical properties

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|---|---|
| Appearance | Amber liquid |
| Physical State | Liquid |
| Odor | Data not available. |
| Odor Threshold | Data not available. |
| pH | Data not available. |
| Melting/Freezing Point | Data not available |
| Initial Boiling Point oC (oF) | Approximately 101 degree |
| Flash Point | Data not available |
| Evaporation Rate | Data not available |
| Flammability | Data not available |
| Flammability/Explosive Limits | Data not available |
| Vapor Pressure | Data not available |
| Vapor Density | Data not available |
| Relative density (water = 1) | 1.08 |
| Solubility | Miscible |
| Partition Coefficient | Data not available |
| Auto-Ignition Temperature | Data not available |
| Decomposition Temperature | Data not available |
| Viscosity | Data not available |
| Explosive Properties | Data not available |
| Oxidizing Properties | Data not available |

## 10. Stability and reactivity

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|---|---|
| Reactivity and Chemical Stability | Stable under normal conditions of use and storage. |
| Possibility of Hazardous Reactions | Data not available. |
| Conditions to Avoid and Incompatible Materials | Keep only in original container. Strong bases, metallic powders, Carbides, Hydrogen Sulfide, Turpentine, wood, oxidizable matter, and combustible organics. |
| Hazardous Decomposition Products | Will not occur. |

## 11. Toxicological information

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|---|---|
| Acute Toxicity | Dermal Exposure: Not applicable. |
| Acute Toxicity | Inhalation Exposure: Fatal if inhaled. Do not breathe fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water immediately). Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations. |
| Acute Toxicity | Other Information: LDLo, Oral, Human: 430 mg/kg (Nitric Acid), details of toxic effects not reported other than lethal dose value. |
| Skin Corrosion and Irritation | Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations. |
| Serious Eye Damage and Irritation | Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. |
| Carcinogenicity | |

## 6. Accidental Release Measures

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| Physical State | Liquid |
| Odor | Data not available. |
| Odor Threshold | Data not available. |
| pH | Data not available. |
| Melting/Freezing Point | Data not available |
| Initial Boiling Point oC (oF) | Approximately 101 degree |
| Flash Point | Data not available |
| Evaporation Rate | Data not available |
| Flammability | Data not available |
| Flammability/Explosive Limits | Data not available |
| Vapor Pressure | Data not available |
| Vapor Density | Data not available |
| Relative density (water = 1) | 1.08 |
| Solubility | Miscible |
| Partition Coefficient | Data not available |
| Auto-Ignition Temperature | Data not available |
| Decomposition Temperature | Data not available |
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| Explosive Properties | Data not available |
| Oxidizing Properties | Data not available |

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| Possibility of Hazardous Reactions | Data not available. |
| Conditions to Avoid and Incompatible Materials | Keep only in original container. Strong bases, metallic powders, Carbides, Hydrogen Sulfide, Turpentine, wood, oxidizable matter, and combustible organics. |
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| Vapor Density | Data not available |
| Relative density (water = 1) | 1.08 |
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| Carcinogenicity | |
| Specific Target Organ Toxicity from Single Exposure | Causes damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations |
| Specific Target Organ Toxicity from Repeated Exposure | Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations. |
| Aspiration Hazard | Not applicable. |
| Additional Toxicology Information | Data not available. |

## 12. Ecological information

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|---|---|
| Ecotoxicity | Data not available. |
| Persistence and Degradability | Data not available. |
| Bioaccumulative potential | Data not available. |
| Mobility in soil | Data not available. |
| Other Adverse Ecological Effects | Data not available. |

## 13. Disposal considerations

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| Waste from Residues / Unused Products | Data not available. |

## 14. Transport information

Transportation by Land-Department of Transportation (DOT, United States of America)

| | |
|---|---|
| UN Number | UN3264 |
| Proper shipping name | Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid) |
| Class | 8 |
| Packing Group | III |

Transportation by Air - International Air Transport Association (IATA)

| | |
|---|---|
| UN Number | UN3264 |
| Proper shipping name | Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid) |
| Class | 8 |
| Packing Group | III |

## 15. Regulatory information

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| Occupational Safety and Health Administration (OSHA) Hazards | Not listed. |
| Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances | Nitric Acid (CAS 7697-37-2): 1000 lb EPCRA RQ<br>Nitric Acid (CAS 7697-37-2): 1000 lb TPQ |
| Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals | Nitric Acid (CAS 7697-37-2): 1000 lb final RQ; 454 kg final RQ |
| Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI) | Nitric Acid (CAS 7697-37-2): 1.0 percent de minimis concentration |
| Massachusetts Right-to-Know Substance List | Nitric Acid (CAS 7697-37-2): Extraordinarily hazardous |

## 16. Other information

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|---|---|
| Other Information | The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if RX Marine International has been advised of the possibility of such damages. |